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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

SOYA BEAN

UPOV Code(s): GLYCI_MAX

Glycine max (L.) Merr.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from Argentina
to be considered by the
Technical Working Party for Agricultural Crops
at its forty-sixth session, to be held in Hanover, Germany,
from 2017-06-19 to 2017-06-23

Disclaimer: this document does not represent UPOV policies or guidance

Alternative names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Glycine max (L.) Merr., *Soja hispida* Moench	Soya Bean, Soybean	Soja	Sojabohne	Soja

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Glycine max* (L.) Merr.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of seed.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

1 kg.

The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should, be stated by the applicant.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 Number of Growing Cycles

3.1.1 The minimum duration of tests should normally be two independent growing cycles.

3.1.2 The two independent growing cycles should be in the form of two separate plantings.

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 “Examining Distinctness”.

3.3 Conditions for Conducting the Examination

3.3.1 The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.

3.3.2 The optimum stage of development for the assessment of each characteristic is indicated by a number in the second column of the Table of Characteristics. The stages of development denoted by each number are described in Chapter 8.

3.4 Test Design

3.4.1 Each test should be designed to result in a total of at least 300 plants, which should be divided between at least 2 replicates.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.5 Additional Tests

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 Distinctness

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.1.4 Number of plants or parts of plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 20 plants or parts of plants taken from each of 20 plants and any other observations made on all plants in the test, disregarding any off-type plants.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the second column of the Table of Characteristics (see document TGP/9 “Examining Distinctness”, Section 4 “Observation of characteristics”):

MG: single measurement of a group of plants or parts of plants
MS: measurement of a number of individual plants or parts of plants
VG: visual assessment by a single observation of a group of plants or parts of plants
VS: visual assessment by observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

“Visual” observation (V) is an observation made on the basis of the expert’s judgment. For the purposes of this document, “visual” observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, "G" provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g. VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

4.2 Uniformity

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.2.2 For the assessment of uniformity of xxx varieties, a population standard of 5% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 300 plants, 4 off-type(s) is/are allowed.

4.3 Stability

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be further examined by testing a new seed stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

(a) Plant: growth type (characteristic 2)
(b) Plant: colour of hairs (characteristic 4)
(c) Flower color (characteristic 8)
(d) Seed: peroxidase reaction (characteristic 15)
(e) Seed: hilum color (characteristic 16)
(f) Maturity Group (American Scale) (characteristic 19)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 "Examining Distinctness".

6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 States of Expression and Corresponding Notes

6.2.1 States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.2.2 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	*Note*
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	*Note*
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 “Development of Test Guidelines”.

6.3 Types of Expression

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 Example Varieties

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 Legend

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1 2	**3 4**	**5 6**	**7**			
	Name of characteristics in English	**Nom du caractère en français**	**Name des Merkmals auf Deutsch**	**Nombre del carácter en español**		
	states of expression	types d'expression	Ausprägungsstufen	tipos de expresión		

1 Characteristic number

2 (*) Asterisked characteristic – see Chapter 6.1.2

3 Type of expression
QL Qualitative characteristic – see Chapter 6.3
QN Quantitative characteristic – see Chapter 6.3
PQ Pseudo-qualitative characteristic – see Chapter 6.3

4 Method of observation (and type of plot, if applicable)
MG, MS, VG, VS – see Chapter 4.1.5

5 (+) See Explanations on the Table of Characteristics in Chapter 8.1

6 Not applicable

7 Growth stage key See Explanations on the Table of Characteristics in Chapter 8

7. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.	**(*)**	**PQ VG**		**10**			
		Hypocotyl: anthocyanic coloration					
		green				Davis	1
		green with orange brown				Bragg	2
		purple				Essex	3
2.	**(*)**	**PQ VG**	**(+)**				
		Plant: growth type	**Plante: type de croissance**	**Pflanze: Wuchstyp**	**Planta: porte**		
		determinate	déterminée	begrenzt wachsend	determinado	A 5777 RG, RA 538, A 8000 RG	1
		semideterminate				RA 625, NS 6448, RMO 75	2
		indeterminate	indéterminée	unbegrenzt wachsend	indeterminado	Don Mario 5.9I, RA 728, A 4505 RG	3
3.		**QN VG**	**(+)**	**66**			
		Plant: growth habit					
		erect					3
		semierect					5
		horizontal					7
4.	**(*)**	**PQ VG**	**(+)**	**65-85**			
		Plant: colour of hairs					
		grey				Ayelen 22	1
		light brown				A 4505RG, ADM 4800, Don Mario 3700	2
		dark brown				A 3901RG, RA 728, Nidera A5209 RG	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5.		**QN MG/MS**		**85**			
		Plant: height					
		short				Carla, Paradis, Spot	3
		short to medium				Trump, Essor	4
		medium				Chandor	5
		medium to tall				Kador	6
		tall				Tirol, Toreador	7
6.	**(*)**	**PQ VS**	**(+)**	**65**			
		Leaf: shape of central leaflet					
		lanceolate				SP 7X0	1
		triangular base-elongated leaflet				A 7118 RG	2
		ovoid				Champaquí 5.7	3
		elliptic				A 3550 RG	4
7.		**PQ VS**		**65**			
		<u>Leaf: Shape of the lateral leaflet</u>					
		Rounded ovate					1
		Pointed ovate					2
		Trullate					3
		Lanceolate					4
		Elliptic					5
8.	**(*)**	**QL VG**		**66**			
		Flower color					
		White				Don Mario 5.9I	1
		Violet				SP 7X0	2

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
9.	**(*)**	**PQ VG**		**85**			
		Pod: color					
		black					
		yellowish brown					1
		brown red				NS 4009, Nidera A 4990 RG, A 3901RG, A 4505 RG, Don Mario 7.0I	2
		brown black				Ayelen 22, AS 4402, Don Mario 6.2I, ALM 4650	3
		grey					4
10.	**(*)**	**QN VG**		**85**			
		Pod: intensity of color					
		light					1
		medium					5
		dark					9
11.		**QN VG**		**89**			
		Seed: size					
		small				Alba, Aurelia, Flusk GT 512	3
		medium				Queen, Goldor	5
		large				Clédor, Cervin, Mondor	7
12.		**PQ VG**	**(+)**	**89**			
		Seed: shape					
		spherical					1
		spherical flattened					2
		elongated					3
		elongated flattened					4

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
13.		**PQ VG**		**89**			
		Seed: ground color of testa (excluding hilum)					
		yellow				Paoki, Queen	1
		yellow green					2
		green					3
		light brown					4
		medium brown					5
		dark brown					6
		purple					7
		black					9
14.		**PQ MG**		**89**			
		Seed: glossines					
		opaque				CH 4308 RG	1
		intermediate					2
		bright				RA 732	3
15.	**(*)**	**QL MG**	**(+)**	**89**			
		Seed: peroxidase reaction					
		negative (absent)				Bragg	1
		positive (present)				Hood, Hood 75	2

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
16.	**(*)**	**PQ VG**	**(+)**	**89**			
		Seed: hilum color					
		grey				Spot, Apache, Major	1
		yellow				Imari, Talon, Maple Arrow	2
		light brown				Baron, Kingsoy, Argenta, Opale	3
		medium brown					4
		dark brown				Fransoy 242, Aurélia, Léman	5
		imperfect black				Kador, Wells, Folio	6
		black				Chandor, Paoki, Queen	7
		light or medium brown and imperfect black					8
		imperfect yellow					9
		light black					10
17.		**PQ VG**		**89**			
		Seed: color of hilum funicle					
		same as testa				Queen	1
		different to testa				Gieso	2

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
18.	**QN MG**	**(+)**	**19**			
	Plant: time of beginning of flowering					
	very early				Carla, Paradis, Trump, Sito	1
	very early to early				Essor, Labrador, Arcade	2
	early				Imari, Queen, Canton	3
	early to medium				Kador, Alaric, Niva	4
	medium				Williams	5
	medium to late					6
	late					7
	late to very late					8
	very late					9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
19.	**(*)**	**QN MG**		**89**			
		Maturity Group (American Scale)					
		000					1
		00					2
		0					3
		I					4
		II				Ayelen 22	5
		III				Don Mario 3700	6
		IV				CH 4308 RG	7
		V				Nidera A5209 RG, Champaquí 5.7, Don Mario 5.2	8
		VI				Don Mario 6.2I	9
		VII				RA 728, A 7118 RG, Don Mario 7.0I, RA 732	10
		VIII				Nidera A 8087 RG	11
		IX				A 9000RG	12
		X					13

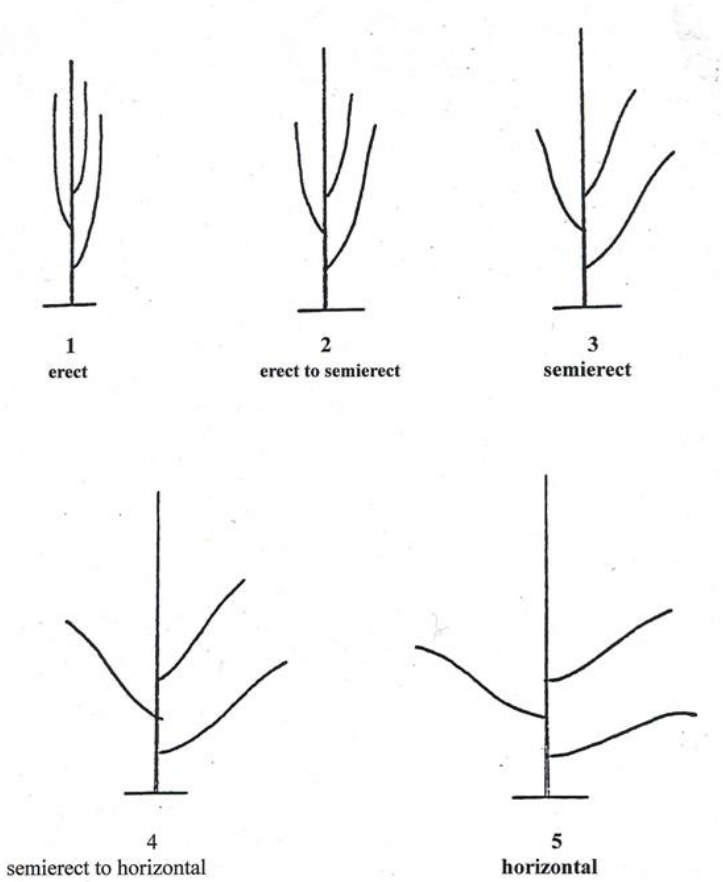
8. Explanations on the Table of Characteristics

8.1 Explanations for individual characteristics

Ad. 2: Plant: growth type

Layout: This characteristic should preferably be assessed in a special trial with 3 or 4 replicates of 20 plants each with about 9 cm between plants in the rows. Any border effect must be avoided. – Plant material: Candidate and example varieties must be grown in groups according to their earliness at maturity (characteristic 20). – Observation: At the beginning of flowering time (1 flower at any level of the main stem), the apex of the plant must be identified with a mark. At maturity (free kernels in the pod), the number of nodes between the mark and the top of the plant is counted. The average number per variety gives–in comparison with standard varieties–the state of expression of the characteristics. In addition, the characteristic “Size of the terminal leaf” could also be considered to separate more clearly the state of expression “determinate” (Note 1) from other states. The terminal leaf on the main stem of determinate varieties is more or less equal to other leaves at lower levels. For other types, the terminal leaf is clearly smaller.

Ad. 3: Plant: growth habit



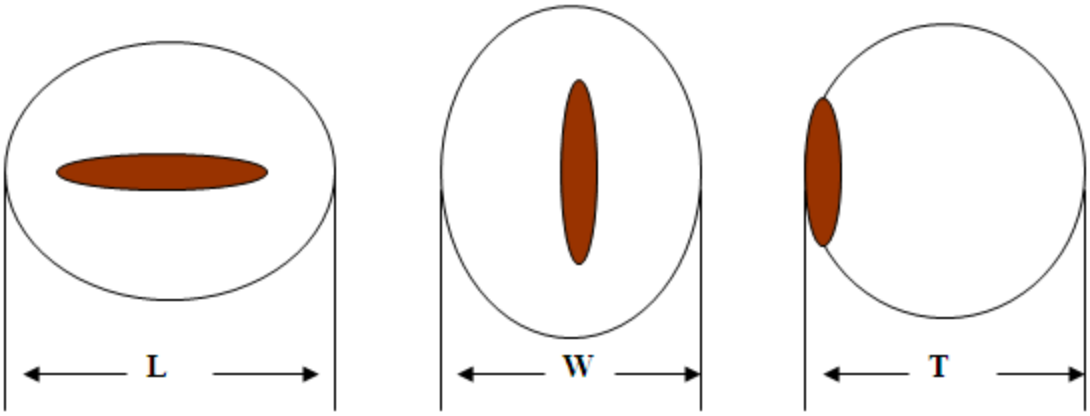
Ad. 4: Plant: colour of hairs

Visual observation on the third middle of the plant

Ad. 6: Leaf: shape of central leaflet

		← broadest part →		
		below middle	at middle	above middle
width (ratio length/width)				
narrow (high)		 1 lanceolate	 2 trullate slighty elongated	 4 Elliptic
medium (medium)		 5 ovate		
broad (low)				

Ad. 12: Seed: shape



1 - spherical: W/L ≥ 0.90, T/W ≥ 0.85
2 - spherical flattened: W/L ≥ 0.90, T/W ≤ 0.84
3 - elongated: W/L ≤ 0.89, T/W ≥ 0.85
4 - elongated flattened: W/L ≤ 0.89, T/W ≤ 0.84

Ad. 15: Seed: peroxidase reaction

Seed: coloration due to peroxidase activity in seed coat

20 seeds per variety should be tested.

The seed coat of the seed should be removed carefully so that no piece of cotyledon remains. To facilitate this procedure, the seed should be placed in water for 2 hours.

The seed coat should be placed in a cell box or in tubes (one tube per seed) and 3 to 4 cm3 of 0,5% Guayacol solution should be added. The 0.5% Guayacol solution should be stored in the refrigerator for a period of not longer than 2 months. After having left it at room temperature for one day or more, it can no longer be used.

After 10 minutes waiting time, one drop of 0,1% H2O2 solution should be added.

The solution changes to dark red/brown color for a positive reaction or remains without color for a negative reaction. In order to check the 0,5% Guaycacol solution, it is advisable to include some seeds of a reference variety with a positive reaction. The recording of this reaction must be done not longer than 60 seconds after the H2O2 was added. It is very important that the observation must not be done longer than 60 seconds because it could lead to wrong results.

The cell box or the tubes could be softly shaken for a better reaction. For a better recording of the observation, the tubes or the cell box should be placed over a white surface.

Ad. 16: Seed: hilum color

Imperfect black: dark center that can vary from black to brown , surrounded by a light brown halo

Ad. 18: Plant: time of beginning of flowering

50% plants with at least one flower open

9. Literature

Taylor, B.H, Caviness C.E, MAY - JUNE 1982, Hilum color variation in soybean seed with Imperfect Black genotype, Crop Science Vol. 22. Pioli R.N, Morandi E.N. 2003 Morphologic, molecular, and pathogenic characterization of Diaphorthe phaseolorum viariability in the core soybean-producing area of Argentina. Vol 93, Nº 2 136-146. Dorrance A., Berry S.A.. 2008. Isolation, Storage, Pathotype Characterization, and Evoluation of Resistance for Phytophthora sojae in soybean. Plant Management Network.
J.R Wilcox - 1987. Soybeans: Improvement, Production, and Uses.
Objective Description of variety. Soybean (Glycine max (L.) Merr.). US Department of Agriculture Agricultural Marketing Service Science and Technology Plant Variety Protection. Beltsville, MD.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1	Botanical name	*Glycine max* (L.) Merr.
1.2	Common name	Soya Bean, Soybean

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	

3. Proposed denomination and breeder's reference

Proposed denomination (if available)	
Breeder's reference	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

#4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]

(please state parent varieties)

(……..……..…) x (……..……..…)

female parent male parent

(b) partially known cross [ ]

(please state known parent variety(ies))

(……..……..…) x (……..……..…)

female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]

(please state parent variety)

4.1.3 Discovery and development [ ]

(please state where and when discovered and how developed)

4.1.4 Other [ ]

(please provide details)

Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

4.2 Method of propagating the variety

4.2.1 Other [ ]

(Please provide details)

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

	Characteristics	Example Varieties	Note
5.1 (2)	**Plant: growth type**		
	determinate	A 5777 RG, A 8000 RG, RA 538	1 [ ]
	semideterminate	NS 6448, RA 625, RMO 75	2 [ ]
	indeterminate	A 4505 RG, Don Mario 5.9I, RA 728	3 [ ]
5.2 (4)	**Plant: colour of hairs**		
	grey	Ayelen 22	1 [ ]
	light brown	A 4505RG, ADM 4800, Don Mario 3700	2 [ ]
	dark brown	A 3901RG, Nidera A5209 RG, RA 728	3 [ ]
5.3 (8)	**Flower color**		
	White	Don Mario 5.9I	1 [ ]
	Violet	SP 7X0	2 [ ]
5.4 (15)	**Seed: peroxidase reaction**		
	negative (absent)	Bragg	1 [ ]
	positive (present)	Hood, Hood 75	2 [ ]
5.5 (16)	**Seed: hilum color**		
	grey	Apache, Major, Spot	1 [ ]
	yellow	Imari, Maple Arrow, Talon	2 [ ]
	light brown	Argenta, Baron, Kingsoy, Opale	3 [ ]
	medium brown		4 [ ]
	dark brown	Aurélia, Fransoy 242, Léman	5 [ ]
	imperfect black	Folio, Kador, Wells	6 [ ]
	black	Chandor, Paoki, Queen	7 [ ]
	light or medium brown and imperfect black		8 [ ]
	imperfect yellow		9 [ ]
	light black		10 [ ]

	Characteristics	Example Varieties	Note
5.6 (19)	**Maturity Group (American Scale)**		
	000		1 [ ]
	00		2 [ ]
	0		3 [ ]
	I		4 [ ]
	II	Ayelen 22	5 [ ]
	III	Don Mario 3700	6 [ ]
	IV	CH 4308 RG	7 [ ]
	V	Champaquí 5.7, Don Mario 5.2, Nidera A5209 RG	8 [ ]
	VI	Don Mario 6.2I	9 [ ]
	VII	A 7118 RG, Don Mario 7.0I, RA 728, RA 732	10 [ ]
	VIII	Nidera A 8087 RG	11 [ ]
	IX	A 9000RG	12 [ ]
	X		13 [ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	*Flower Color*	*White*	*Violet*

Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

#7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [ ] No [ ]

(If yes, please provide details)

7.2 Are there any special conditions for growing the variety or conducting the examination?

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

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8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [ ] No [ ]

(b) Has such authorization been obtained?

Yes [ ] No [ ]

If the answer to (b) is yes, please attach a copy of the authorization.

9. Information on plant material to be examined or submitted for examination

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a)	Microorganisms (e.g. virus, bacteria, phytoplasma)	Yes [ ]	No [ ]
(b)	Chemical treatment (e.g. growth retardant, pesticide)	Yes [ ]	No [ ]
(c)	Tissue culture	Yes [ ]	No [ ]
(d)	Other factors	Yes [ ]	No [ ]

Please provide details for where you have indicated “yes”.

.....

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant’s name

Signature Date

[End of document]